DOCUMENT RESUME

ED 206 478 SE 035 553

AUTHOR Buskirk, E. Drannon, Jr.; Cole, Charles A.
TITLE Facility Planning in the Construction Grants Program. Instructor Guide. Working for Clean Water: An Information Program for Advisory Groups.
INSTITUTION Pennsylvania State Univ., Middletown. Inst. of State and Regional Affairs.
SPONS AGENCY Environmental Protection Agency, Washington, D. C.
PUB DATE 81
CONTRACT EPA-CT900980-01
NOTE 25p.; For related documents, see SE 035 551-566 and SE 035 727.
AVAILABLE FROM SMEAC Information Reference Center, 1200 Chambers Rd., 3rd Floor, Columbus, OH 43212 (Tape and slides only available for rental, $10.00 plus postage).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adult Education; *Citizen Participation; *Community Planning; *Environmental Education; Federal Aid; Nonschool Educational Programs; Planning; Postsecondary Education; Science Education; *Waste Disposal; *Water Resources
IDENTIFIERS *Waste Water Treatment

ABSTRACT

Wastewater facility planning is an essential component of the federal construction grants process. Presented in this instructor's guide is a one-hour presentation on facility planning intended for citizen advisory groups. The guide is part of the Working for Clean Water Project, which also includes a supplementary audiovisual presentation. (Author/WB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED206470

Working for Clean Water
An Information Program for Advisory Groups

Facility Planning in the Construction Grants Programs

Instructor Guide

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION

X

Peter L. Wise
EPA

SE 035 553

This program was prepared by

The Pennsylvania State University
Institute of State & Regional Affairs
Middletown, PA 17057

Dr. Charles A. Cole
Project Director
Dr. E. Drannon Buskirk, Jr.
Project Co-Director
Prof. Lorna Chr. Stoltzfus
Editor

This guide was prepared by

E. Drannon Buskirk, Jr.,
Charles A. Cole

Advisory Team for the Project

David Elkinton, State of West Virginia
Steve Frishman, private citizen
Michele Frome, private citizen
John Hammond, private citizen
Joan Jurancich, State of California
Richard Hetherington, EPA Region 10
Rosemary Henderson, EPA Region 6
George Hoessel, EPA Region 3
George Neiss, EPA Region 5
Ray Pfortner, EPA Region 2
Paul Pinault, EPA Region 1
Earlene Wilson, EPA Region 7
Dan Burrows, EPA Headquarters
Ben Gryctko, EPA Headquarters
Robert Hardaker, EPA Headquarters
Charles Kauffman, EPA Headquarters
Steve Maier, EPA Headquarters

EPA Project Officer

Barry H. Jordan
Office of Water Programs Operations

Acknowledgements

Typists
Jan Russ, Tess Startoni,
Ann Kirsch, Janie Fuller

Student Assistants
Fran Costanzi, Kathy DeBatt,
Michael Lapano, Mike Moulds
Terry Switzer

Graphics support was provided by the Office of Public Awareness, Environmental Protection Agency.

This information program was financed with federal funds from the U.S. Environmental Protection Agency under Cooperative Agreement No. CT900980 01. The information program has been reviewed by the Environmental Protection Agency and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement of recommendation for use.

This project is dedicated to the memory of Susan A. Cole.

Facility Planning

Wastewater facility planning is the most important step of the federal construction grants process. Step 1, facility planning, includes six major decision points. Each should have citizen involvement:

- Assessment of the current situation
- Assessment of the future situation
- Identification of alternatives
- Cost-effectiveness analysis
- Environmental assessment
- Selection of recommended alternative.

In Step 2 the facilities are designed. Construction occurs during Step 3.

Required Materials

☐Set of slides with cassette tape for the audiovisual presentation, "Overview of Facility Planning"

☐Slide projector, cassette tape player, and screen

☐Chalkboard, flip chart with easel, or transparencies with overhead projector for guided discussion

☐Copy of handbook "Overview of Facility Planning" for each participant

☐Copies of the situation exercise sheets for each participant.

Important Notes

1. This instructor guide features several options:

   a. Show the slide-tape program without substantive discussion

   b. Discuss the opportunities for citizen involvement in facility planning

   c. Engage in situation exercises about facility planning.

Any combination of these options may be used, but almost all of them are necessary for the total picture. If all of the instructional options are chosen, a one-hour presentation will be insufficient.

2. The facility planning process has many aspects that possibly can be best explained by persons most familiar with them. Area or state water quality personnel may serve as a back-up.

3. Encourage the participants to talk to their neighbors about community water and wastewater problems. An assessment of the current situation is the first phase in facility planning.

4. Prepare copies of the situation exercise sheets for all participants. The instructor may use the situation exercise sheets provided in the Appendix of this guide, or may develop others that are more pertinent to the local situation.

5. Situation exercises are types of simulations in which participants can relate to real-life situations, or can practice newly acquired skills or knowledge. The exercises have two fundamental elements: a structure and role playing. The structure includes the rules for the simulation, the task to be performed, and special conditions that must be observed. Participants are usually asked to represent a group or an individual, perhaps themselves. If the instructor develops situation exercises, several steps are essential:

- Determine purpose of the exercise
- Provide the group with a task that is clear, explicit, and has a definite endpoint
- Determine in advance what rules must be followed and what special conditions are to be met. For example, must the group achieve consensus on a decision?
- Identify and assign roles to participants.

Suggested Activities

Introductory Comments	5 minutes
Audiovisual Presentation	15 minutes
Guided Discussion	30 minutes
Closing Remarks	10 minutes
TOTAL TIME	60 minutes

Introductory Comments (5 minutes)

1. Water quality problems are solved by first planning, and only later by possibly constructing a facility. Construction must not be predetermined. Often a water quality problem may be corrected by improved operation and management of existing facilities or programs.

Use chart 1 on Facilities Planning.

2. Facility planning is a formal part of the construction grants process. Preliminary analysis indicates if there is a need for improved water quality. If the state considers the project to have priority for funding, the community applies for a Step 1 grant to prepare a facility plan.

3. The design of the facility may be funded under a Step 2 grant if the facility plan has been approved.

4. Construction will be supported by a Step 3 grant.

5. Finally, the facility is completed, and enters the operation and management phase.

Audiovisual Presentation (15 minutes)

1. The slide-tape presentation explains the facility planning process in the Construction Grants Program of the U.S. Environmental Protection Agency.

Audiovisual script is in the Appendix.

2. It discusses public participation in general, and highlights the role for the advisory group in detail.

3. Point out particular aspects or questions in the audiovisual presentation that have relevance for the local situation.

Guided Discussion (30 minutes)

Use chart 2 on Citizen Involvement in Facility Planning.

1. Citizens have many opportunities for involvement in facility planning. Both information-giving activities such as fact sheets, and information-receiving techniques such as meetings are involved.

Discuss which measures may be appropriate for the local situation.

Use situation exercise sheets in the Appendix.

2. Situation exercises can be used for several objectives. They can be used to emphasize important points; they can cover incidental matters; a change of pace and exchange of ideas can be accomplished with them. These exercises are intended for the latter objectives.

3. They are simple to conduct, and they can be quite refreshing. The following sequence of activities is followed:

a. Assign the participants to groups of three or more persons.

b. Pass out the situation sheets to each person.

c. Give each group two or three minutes to discuss the options and mark their responses on the sheets.

d. Ask for a show of hands on the various options.

e. Then, explore why certain options were or were not chosen. Encourage personal experiences to be given during these exchanges.

f. Often the exercises have no right or wrong answers.

Bring out the ramifications and tradeoffs of the various options.

Closing Remarks (10 minutes)

Use chart 1 on Facility Planning.

1. Construction of a wastewater treatment facility is somewhat like constructing a house. The family must determine their needs and desires for the new house, and then determine if they can find funding.

During planning many alternatives should be considered, and the impacts of the various alternatives should be weighed. Finally, the most cost-effective alternative (i.e. the cheapest one that satisfies the needs) is chosen. Ultimately the design and construction of the home takes place.

2. Answer any remaining questions.

Selected Resources

Rastatter, Clem L., ed. Municipal Wastewater Management: Citizens Guide to Facility Planning. FRD-6. Washington, DC: U.S. Environmental Protection Agency, Office of Water Program Operations, January 1979. 263 pp.

A publication prepared by the Conservation Foundation, Washington, DC, it provides a selective and extensive discussion of activities pertinent to the responsibilities and work of advisory groups. It includes the discussion on public participation. This publication can be obtained from: General Services Administration (8 FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225.

Rastatter, Clem L., ed. Municipal Wastewater Management: Public Involvement Activities Guide. FRD-7. Washington, DC: U.S. Environmental Protection Agency, Office of Water Program Operations, February 1979. 126 pp.

This handbook was prepared by the Conservation Foundation for use in a training program to acquaint citizen leaders with the important decisions that are made in planning municipal wastewater facilities. It condenses the Citizens Guide to Facility Planning. It is available from General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, Denver, CO 80225.

A Training Workshop on Public Participation Skills and Requirements for Project Managers in the Wastewater Treatment Construction Grants Program. State of Maryland, Annapolis: Barry Lawson Associates, Inc., July 17 and 18, 1979. Approximately 100 pp.

This manual is an excellent collection of materials on considerations in conducting public participation programs. It features situation exercise sheets, two of which were adapted for use here. The manual is available from Barry Lawson Associates, Inc., 148 State Street, Boston, MA 02109.

Deese, P. L. and J. F. Kudson. Planning Wastewater Management Facilities for Small Communities. Draft. Cincinnati, OH: Municipal Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, July 1979. 141 pp.

This manual presents a set of procedures for planning wastewater management for small communities and is directed at areas with populations less than 10,000 persons. Part 1 was prepared to give an overview of the planning process and is most useful for the advisory group. Part 2 is a technical reference showing details using case studies. Order from ORD Publications Center for Environmental Research Information, U.S. Environmental Protection Agency, 26 West St. Clair Street, Cincinnati, OH 45268.

Appendix

A. Contents of charts for use by instructor in the suggested activities. These charts may be used to make transparencies or the contents may be copied onto chalkboards.

1. Facilities Planning

2. Citizen Involvement in Facility Planning

B. Handouts for use by the instructor in the guided discussions. Copies will need to be made for each participant.

1. Situation Exercise Sheets

   a. Situation A: Environmental Impact Statement

   b. Situation B: Treatment Alternatives

   c. Situation C: Citizen Protest

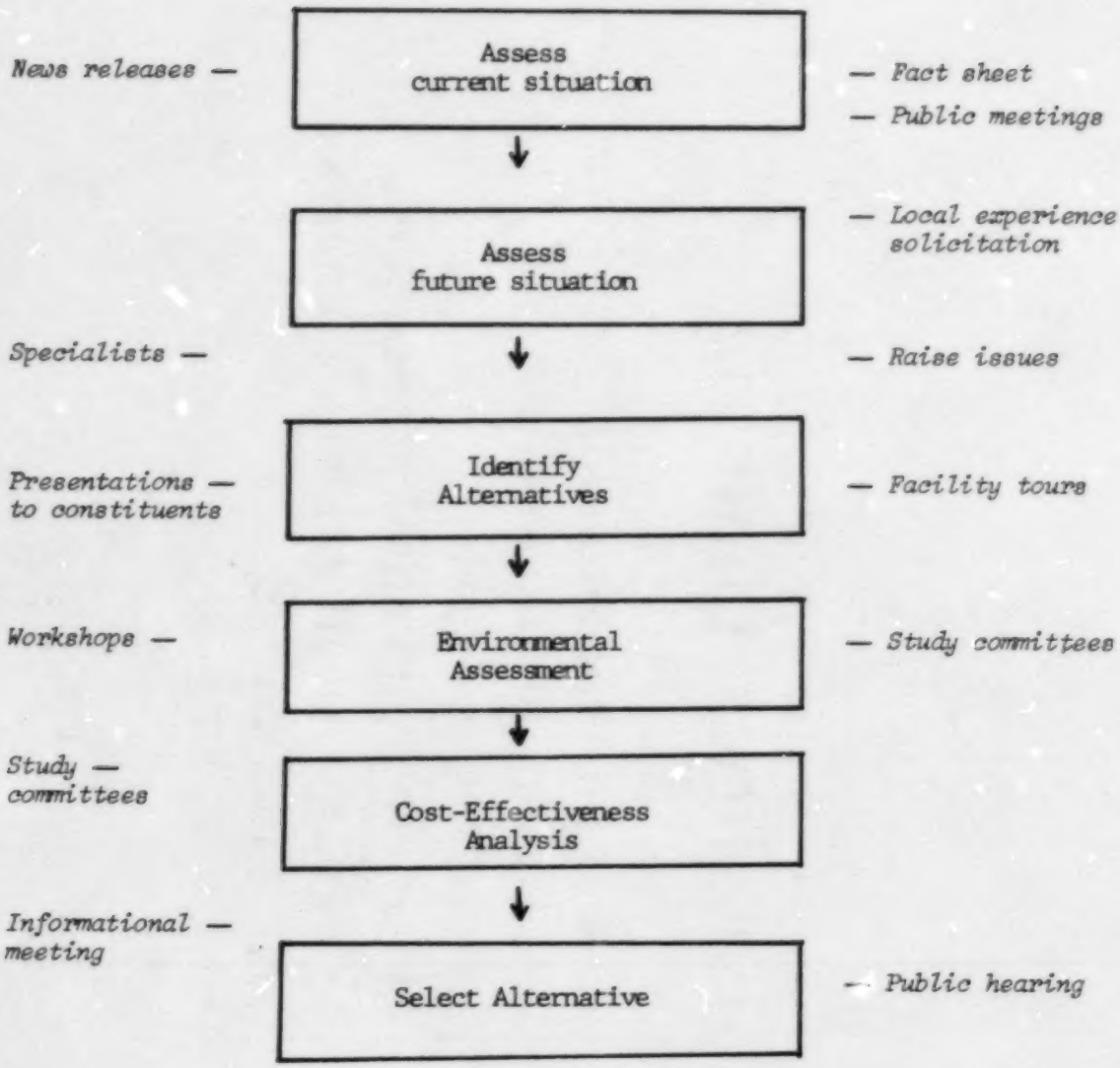
   d. Situation D: Public Involvement

C. Copy of the script for the slide-tape program, "Overview of Facility Planning."

Facilities Planning

Assess current situation
Assess future situation
Identify alternatives
Make environmental assessment
Conduct cost-effectiveness analysis
Select alternative

CITIZEN INVOLVEMENT IN FACILITY PLANNING



SITUATION A: ENVIRONMENTAL IMPACT STATEMENT

Every facility project is required to conduct an environmental assessment. This assessment is sometimes the basis for determining the justification of an Environmental Impact Statement (EIS) by the EPA. Special interest groups often seek to provide input in project decision making, or seek to delay the project through the preparation of an EIS.

On the advisory group to a 201 grantee you represent interests who desire to see that an EIS is done. The grantee is reluctant to begin one. The EPA does not feel that an EIS is warranted. Your organization is thinking about bringing litigation against the EPA to force preparation of an EIS. In this situation you should:

(Choose one or more below)

_____ (a) present the concerns of your organization to the advisory group

_____ (b) use your role as an advisory group member to influence the grantee

_____ (c) lead an advisory group subcommittee in studying the claims of your interest group

_____ (d) seek a vote of support from the advisory group that an EIS is needed

_____ (e) resign membership on the advisory group because of potential conflicts of interest

_____ (f) other: _____

_____

Situation B: Treatment Alternatives

In Step 1 facility planning the range of planning considerations is quite large. In developing wastewater treatment and disposal options, these considerations include:

- small-scale and central treatment options
- land treatment
- reduced wastewater flows, including water conservation, recycling, and reuse
- innovative and alternative technologies
- multiple use opportunities
- local conditions.

Thoughtful analysis of each topic is formidable. In dealing with the problem you decide to:

(Choose one or more below)

_____ (a) call in the consultant for regular briefings

_____ (b) form advisory group subcommittees, each of which is responsible for studying particular aspects

_____ (c) participate in water quality management training sessions

_____ (d) react to draft decisions by the grantee

_____ (e) solicit the advice of the community on each topic

_____ (f) other: _____

_____

SITUATION C: CITIZEN PROTEST

While in the midst of reviewing a community's facility plan you are contacted by the irate representative of a newly-formed citizens' group. The plan's summary of public participation appears more than adequate for the abbreviated program the community was to conduct. No opposition appears in the public hearing transcript. It seems, however, that this group of citizens finally woke up, after the hearing, to the fact that the proposed facility will increase their local taxes by 10% and require a user charge of nearly $200 per year. The citizens' group now thinks that the facility plan should be scrapped and the whole process started over. Thinking quickly while the citizens' group representative waits on the other end of the line, you decide to:

(Choose one or more below)

_____ (a) ask him to call back in an hour after you've had a chance to read through the file, and then leave the phone off the hook for the rest of the day

_____ (b) explain that all legal requirements have been met and that initiating a new study would be tremendously expensive

_____ (c) express your concern and promise to get back to them as soon as possible

_____ (d) tell him that you understand his group's concern and will require that an additional public meeting be held on the cost issue

_____ (e) other: _____

_____

Adapted from materials supplied by Barry Lawson Associates, Inc.

SITUATION D: PUBLIC INVOLVEMENT

Late in Step One planning, a discussion with a community's consultant shows that the treatment facility will probably be built on a site abutting residential properties. The preferred alternative has not been chosen, but this site seems the best for any of the treatment methods under consideration. The consultant claims to have conducted a respectable public participation program, but says that no input has been received from these abutters. A confrontation later in Steps Two and Three is feared. You suggest that:

(Choose one or more below)

_____ (a) the consultant should personally call on the abutters and make sure they are aware of the 201 planning process

_____ (b) a local official should talk with the abutters

_____ (c) a special fact sheet or letter should be sent to the abutters pointing out the reasons why a facility may be built near them

_____ (d) a meeting should be held involving the abutters, the consultant, local officials, and yourself

_____ (e) the abutters should be specially invited to the regular public hearing

_____ (f) other: _____

_____

Adapted from materials supplied by Barry Lawson Associates, Inc.

Audiovisual Script

OVERVIEW OF FACILITY PLANNING

Slide Description	Narrative
1. Words: Start cassette on this slide	
2. Title slide	Music
3. Picture: Sewage treatment plant	Let's face it, a sewage treatment plant lacks the appeal of a new park or a new public library.
4. Picture: Sewage pollution problem area	Most people have little interest in sewage until it poses a serious threat to their community or family. Their concern may be related to health problems, a public nuisance, or higher taxes caused by sewage treatment problems.
5. Words: Why improve an existing facility or build a new one?	Why does a community take the necessary steps to build or improve existing sewage treatment facilities? There are several possible explanations.
6. Words: - improve public facilities	Voluntary community action to develop or improve public facilities,
- remove a public nuisance	To remove a public nuisance or community problem,
- comply with health codes	Compliance with local or other public health codes,
- comply with pollution regulations	Compliance with federal pollution control regulations or state water quality standards
- comply with court order	Compliance with court orders.
7. Words: Super over water scene:	While local desires of public health considerations may be factors, most communities must deal with sewage treatment problems for two reasons:
- Federal Clean Water Act - State Water Quality Standards	The Federal Clean Water Act of 1977, and the state water quality standards.

8. Picture: Lake with canoe	Through the Clean Water Act, Congress and the President have established a national goal of water suitable for fishing and swimming.
9. Picture: Secondary treatment in sewage plant	The Act requires at least secondary treatment for all publicly owned sewage systems. Secondary treatment generally removes 85% of BOD and suspended solids from sewage. This amounts to no more than 30 mg/l of BOD and suspended solids remaining in the effluent. (Pause) Effluent is that purified water leaving the treatment plant.
10. Words: BOD & suspended solids are measures of pollution strength	BOD, meaning biochemical oxygen demand, and suspended solids are measures of pollution strength.
11. Words: Super over sewage treatment plant: - National Pollution Discharge Elimination System	Enforcement of these regulations is insured through the National Pollution Discharge Elimination System (NPDES) that requires permits for the wastewater discharges.
12. Graphic: Animated character (state) turning off valve on "Pollution Drain" into resort lake	States determine how much pollution can enter a water body by establishing water quality standards. These standards are based on the potential uses of the water body.
13. Graphic: Animated character limiting water pollution	In order to meet and maintain these standards, limitations are placed on industrial and municipal discharges. These limitations often determine the type of treatment facilities which must be built and the level of treatment which must be used.
14. Picture: Attractive treatment facility	The advisory group should understand from the outset <u>why</u> the community is developing a wastewater facility plan. The events or conditions which cause a community to look at its wastewater problems go a long way toward determining the outcome.
15. Picture: EPA construction grants program brochure	No matter what initiates the planning, most communities want the federal grant to help pay for new or upgraded treatment facilities. These grants are available through the construction grants program.

It provides for up to 85% funding of the eligible cost of planning, designing and constructing municipal wastewater treatment facilities to help attain the water quality goals.

16. Graphic:
    - Local agency
    - State agency
    - U.S. EPA
    - Construction grants process

The construction grants process is the required stepwise procedure necessary to eventually receive a federal grant for the project.

Three main governmental bodies are involved in the construction grants process. They are the local agency, the state agency, and the United States Environmental Protection Agency or EPA.

17. Graphic: Water pollution problem, state priority list

After the municipality or local agency certifies its water quality needs, it will seek to have its project placed on the state priority list. This priority list is a ranking of proposed projects in order of importance and other state priorities. It considers the severity of the pollution problem, the number of people affected and the need to preserve high quality water bodies. The priority list is subject to a public hearing each year.

18. Graphic: State priority list, EPA

The state then submits its ranking list to EPA which must approve the project before it can be considered for federal funds. If EPA approves, the municipality's consulting firm develops an application for a Step 1 grant.

19. Graphic: Application for Step 1 Grant, facility planning

The Step 1 grant leads to facility planning. The facility plan, a distinct document submitted to EPA, has the objective of making sure that a cost-effective solution is developed to the pollution problem with minimum adverse environmental impact.

20. Picture: Advisory group

The Clean Water Act requires public involvement during facility planning. This is the principle time for advisory group input.

21.	Graphics: Step 2 Grant, Design Stage	When the facility planning is completed, a facility plan is submitted to the state and EPA for approval and a Step 2 grant amendment. The Step 2 grant provides funds for the design of the facilities.
22.	Graphic: Step 3 Grant, Construction Stage	When the plans are ready, the grantee submits them to the state and EPA. If they are approved and funding is provided, the construction phase is ready to begin.
23.	Picture: WW Treatment Plant Under Construction	After construction of the plant is completed the operation and management begins. This is a critical stage of the project, where good previous planning will pay off.
24.	Picture: WW Treatment Plant in Operation	
25.	Words: Super over Advisory Group: - Facility planning and Advisory Groups	Let's return now to the very important facility planning stage and see what goes into planning and why public participation is so important.
26.	Words: Public participation makes good sense because of: - Incorporating public values - Assuring reasonable cost - Adding community benefits - Resolving controversies - Voter support for project	Public participation makes good sense in facility planning for several reasons including: incorporating public values, assuring reasonable cost, adding community benefits, resolving controversies and gaining voter support for the costs. After all, it is for the public, and they should be aware of what is going on.
27.	Words: <u>Facility Planning</u> - Public involvement	Public participation is a requirement of the Step 1 project phase. There are two levels of public participation. The basic level requires a public information program and public involvement.
28.	Picture: Advisory Group meeting	This includes consultation in the early stages of facility planning and a public meeting and hearing in the latter stages.
29.	Words: Super over natural scene: - Full scale public participation program	Among other things, when an environmental impact statement or advanced waste treatment is called for, a full-scale participation program is required.

30. Words:
Super over person working in office:
- Hire Public Participation Coordinator

At this point, a public participation coordinator must be hired or designated to carry out the public participation work plan.

31. Words:
Super over public meeting:
- Hold a public meeting

A second public meeting must also be held early in the facility planning process when current and future considerations are being identified and alternatives screened. The basic level simply requires unspecified consultation at this point.

32. Words:
Super over Advisory Committee Meeting:
- Gettysburg Advisory Group

A citizen advisory committee, of which you are possibly a member, is established to provide advice to the grantee or local agency.

33. Picture: Water Fall

MUSICAL BRIDGE

34. Words:
FACILITY PLANNING STEPS

It is now important to review the facility planning process. It can be separated into several steps and there is a role for the advisory group in each. These steps to be detailed are:

1 - Assessment of the current situation
2 - Assessment of the future situation
3 - Identification of alternatives
4 - Environmental assessment
5 - Cost-effectiveness analysis
6 - Selection of recommended alternatives

1 - Assessment of the current situation

2 - Assessment of the future situation

3 - Identification of alternatives

4 - Environmental assessment

5 - Cost-effectiveness analysis

6 - Selection of recommended alternatives

35. Words:
Super over natural scene:
1) Assessment of the current situation

The first step is a critical step for public involvement. During this step, the problem must be accurately identified. Problem identification will largely determine what alternatives can be looked at.

36. Words:
Super over beach scene:
- Community resources

Concurrently, the agency will be gathering information on the planning area, such as institutions, population, environment and water quality. Data will be needed by the advisory group to verify accurancy and adequacy. Important community resources to be protected must also be determined.

37. Words:
Super over wastewater treatment plant:
2) Assessment of the future situation

Future capacity of the facility must be determined by population studies and input by the advisory group. The plant must be designed for the future population, and for ease in expansion.

38. Words:
- Future Issues
- Geographic Area
- Projected Land Uses
- Total Wastewater Flow Estimate

The answers to these issues are very difficult to obtain. However, they are extremely important. Some of these issues are:
*What Geographic area will the facility serve?
*What are the projected land uses?
*How is the total wastewater flow estimated?

39. Words:
Super over Advisory Group:
- Population Projections
- Sewer service area

Each of these issues has a major impact on the facility. Detailed analysis of these issues by the advisory group is warranted. Many of these issues relate to population projections and the size of the sewer service area.

40. Graphic: $ 30%, treatment plant
$ 70%, sewers

These issues of future population, service area and sewer size are so important that it deserves considerable attention by the advisory group. Approximately 70 percent of wastewater funds are spent for the collection system.

41. Picture: Sewer construction

You should be interested in sewers for reasons other than just cost. Sewers affect future land uses by directing development into areas where they are constructed, and they can affect the future growth of your community.

42. Picture: Sewer construction

The potential for growth promoted by this large sewer was so great in the Gettysburg, Pennsylvania facility plan, that EPA ordered an environmental impact statement to be prepared.

43. Words:
Super over wastewater plant:
3) Identification of Alternatives

There are many ways that the wastewater may be collected and treated.

44. Words: · No facility · Conventional treatment · Land application · Small community and onsite systems · Wastewater effluent reuse	Local conditions and constraints usually reduce the range of options. Four or five basic approaches should be considered. They are: - No facility - Conventional treatment - Land application - Small community and onsite systems - Wastewater effluent reuse
45. Words: Super of no facility and X over treatment plant	Are new facilities really required? Can operation be improved or flows reduced to the existing facility by water conservation?
46. Picture: Conventional wastewater treatment facility	Or, there is the conventional wastewater treatment option in which wastewater is delivered to a central facility. The cost is sometimes high, but it is time-proven and dependable.
47. Picture: Land treatment	Next, one might consider centralized treatment followed by land application of the wastewater. This may be an alternative to expensive advanced waste treatment systems.
48. Picture: Onsite treatment	Small community onsite treatment and disposal is an important option that should be considered. With this approach the facility plan is really a management plan for onsite systems rather than a plan for construction of treatment facilities. Onsite disposal, as land treatment or reuse, qualifies as an alternative technology according to EPA guidelines.
49. Picture: Steel Mill	Wastewater treatment and reuse for industrial cooling or recreation are also alternatives. For example, Baltimore City effluent is used by a steel mill for cooling water.
50. Words: Alternative Technologies Reuse water Reclaim valuable materials Eliminate the discharge of pollutants Recover energy	Alternative technologies reuse water, reclaim materials, eliminate discharges of pollutants or recover energy.

51. Words: Innovative Technologies Reduce: Life cycle cost by 15% OR Energy requirement by 20%	These technologies combined with innovative technologies which either reduce life cycle or energy costs, will qualify the project for 85% federal funding for design and construction. This is an increase of 10% over conventional technologies and a possible reduction in local cost of 40%.
52. Picture: Advisory Group	The advisory group can determine the advantages and disadvantages of the various alternatives. Members must assure themselves that all feasible alternatives are being considered. The group must also determine if the alternatives are compatible with the 208 areawide plan.
53. Words: Super over rural scene: 4) Environmental Assessment and/or Environmental impact statement	The environmental information document is prepared during the facility planning as part of the assessment of the different alternatives. This assessment must take into account both health and safety considerations that may be affected. These considerations may involve the plant either directly or indirectly.
54. Picture: Wastewater plant construction	An environmental information document is prepared during facility planning. This is reviewed by EPA to determine whether a full environmental impact statement is warranted. An environmental impact statement must be prepared when the plan will cause or induce significant land use changes or adverse affect on water quality, noise, public lands, recreational or historic opportunity.
55. Picture: Advisory Group	When industrial waste pretreatment is inadequate to protect uses of the water, or where significant social dislocations will occur, an environmental impact study must be done. It is obvious that considerable input by the advisory group in representing the public is called for during this process.
56. Words: Super over lake: 5) Cost-effectiveness analysis	The final selection of the wastewater treatment alternative is completed within the framework of cost-effectiveness analysis. This is a method of determining how well an option achieves its objectives in terms of economic, social and environmental costs.

57. Picture: Advisory Group	The advisory group should be concerned with environmental and social considerations.
58. Words: Which alternative?	Which alternatives have the least cost without overriding environmental and social considerations? Costs including operations, management and debt retirement should be brought to a per capita basis.
59. Words: Super over Advisory Group: 6) Selecting the alternative	By the time the agency, consultant, advisory group and public have reached this point in the facility planning process, the selection of the alternative should be straight forward.
60. Graphic: Chronology of a construction grant	The whole process of constructing wastewater treatment facilities or even the planning of wastewater management is neither simple, nor short. As much as two years may be required before the design is done and as much as five to seven years may be required to complete the project.
61. Picture: Advisory Group	Although facility planning accounts for only 5% of the total construction grant dollars spent, it does dictate how the remaining 95% will be spent in design and construction. (Pause) Therefore, great care must be taken during this process so as to insure best use of the money.
62. Picture: Advisory Group	The advisory group must also heed the suggestions of the townspeople. The advisory group must try to incorporate these suggestions into the facility planning process to guarantee support of the project. Some alternatives offer the opportunity for reusing wastewater, reducing energy, recycling or reusing resources and conserving water, resulting in substantial savings to homeowners.
63. Credits	MUSIC.

*U S GOVERNMENT PRINTING OFFICE: 1980 341-062/112

Working for Clean Water is a program designed to help advisory groups improve decision making in water quality planning. It aims at helping people focus on essential issues and questions, by providing trained instructors and materials suitable for persons with non-technical backgrounds. These materials include a citizen handbook on important principles and considerations about topics in water quality planning, an audiovisual presentation, and instructor guide for elaborating points, providing additional information, and engaging in problem-solving exercises.

This program consists of 18 informational units on various aspects of water quality planning:

- Role of Advisory Groups
- Public Participation
- Nonpoint Source Pollution: Agriculture, Forestry, and Mining
- Urban Stormwater Runoff
- Groundwater Contamination
- Facility Planning in the Construction Grants Program
- Municipal Wastewater Processes: Overview
- Municipal Wastewater Processes: Details
- Small Systems
- Innovative and Alternative Technologies
- Industrial Pretreatment
- Land Treatment
- Water Conservation and Reuse
- Multiple Use
- Environmental Assessment
- Cost-Effectiveness Analysis
- Wastewater Facilities Operation and Maintenance
- Financial Management

The units are not designed to make technical experts out of citizens and local officials. Each unit contains essential facts, key questions, advice on how to deal with the issues, and clearly-written technical backgrounds. In short, each unit provides the information that citizen advisors need to better fulfill their role.

This program is available through public participation coordinators at the regional offices of the United States Environmental Protection Agency.